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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,157	03/03/2004	Jean-Louis Lalonde	143.008US01	3709

7590   10/18/2007

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EXAMINER
WANG, BEN C

ART UNIT	PAPER NUMBER
2192	

MAIL DATE	DELIVERY MODE
10/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/792,157	LALONDE ET AL.
	Examiner	Art Unit	
	Ben C. Wang	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2007*.

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Applicant's amendment dated July 31, 2007, responding to the Office

action mailed February 2, 2007 provided in the rejection of claims 1-25, wherein

claims 1, 16, and 22 are amended.

Claims 1-25 remain pending in the application and which have been fully

considered by the examiner.

Applicant's arguments with respect to claims rejection have been fully considered

but are moot in view of the new grounds of rejection – see *Joshua Duhl* - art made of

record, as applied hereto.

Claim Rejections – 35 USC § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

2.   Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Joshua Duhl (*Rich Internet Applications, November 2003, IDC*) (hereinafter

'Duhl' - art made of record) in view of Michel K. Bowman-Amuah (Pat. No. US

6,601,234 B1) (hereinafter 'Bowman-Amuah')

3.   **As to claim 1** (Currently Amended), Duhl discloses a distributed

fabrication system for creating, while promoting strategic alignment between

information technology departments and business units' objectives (e.g., P. 23,

3rd Par. – The challenge was <u>to create a prototype platform in two months</u> that

would allow a business manager <u>to quickly develop and change, and centrally</u>

<u>deploy new financial products</u>, promotions and conditions ..... As part of the

effort, they worked with the product group <u>to prototype a visual rule construction</u>

<u>tool</u> that would allow a line of business manager to create rules himself <u>without</u>

<u>the need to go to the IT department</u>), a business application compatible with

XInternet technologies via a communication network, the fabrication system (e.g.,

P. 1, 2nd Par. – <u>Macromedia® has developed technology and tools</u> that enable

new kinds of engaging, highly interactive, applications and user experience.

Using a series of case studies, this White Paper examines <u>Rich Internet</u>

<u>Applications</u> (XInternet technologies) – what they are, why they're needed, who

can use them and the business benefits available to companies that employ

them; P. 26, 4th Par. – To meet the needs of IT organizations these tools will

have to allow them to continue to work they way that they already do and <u>not</u>

<u>force them to rip out and replace legacy technology</u>. These new RIA tools will

need to provide the features that enhance IT developer's abilities to be more

creative and to accomplish RIA development with same or <u>less effort</u> than the

tools they use to create other types of applications; What is required are the tools

that can help developers in Global 2000 companies achieve these objectives

<u>without encountering the difficulties or trying to write RIAs</u> using just 3GL code,

....; P. 27, 2nd Par., Lines 7-10 – <u>Macromedia® is delivering technology for rich Internet applications now</u> and in the first half of 2004 that leverages the ubiquity and cross platform and device support of the Flash player, and works with the hardware and infrastructure that already exists) comprising:

- a client workstation connectable to the communication network, the workstation having a browser interface (e.g., P. 8, 1st Par. – An RIA (<u>Rich Internet Applications</u>) provides a strong technical platform that <u>effectively restores the client's abilities</u> to be more like that of desktop software applications, or a traditional client in <u>a client/server system</u>);

- a software factory displayed in the browser interface through which a user fabricates the business application in response to business need specifications; the software factory being displayed in the browser interface from factory building files (e.g., P. 8, 3rd Par. – Because of their architecture and capabilities, RIAs have the potential to fundamentally change the way companies engage and interact with their <u>Web users</u>, leading to more effective user experiences with top- and bottom-line results), the software factory comprising:

  - a first tool for defining a solution containing the business application, the first tool comprising components for entering solution parameters (e.g., P. 16, 4th Par., Lines 7-10 – XML houses the bulk of the product information, which is all now managed in a content management system allowing *FootJoy®* to more easily update the product content or change <u>the formulas and criteria weights</u> used in the

recommendations; P. 23, 3rd Par. – As part of the effort, they worked

with the product group <u>to prototype a visual rule construction tool</u> that

would allow a line of business manager <u>to create rules</u> himself without

the need to go to the IT department);

- a third tool for validating the solution, the third tool comprising

  components for previewing the solution online by automatically

  generating a working prototype of the business application using

  dynamic database simulation means for testing the working prototype

  of the business application and communication components for

  feedback messages between users testing the working prototype of

  the business application and users constructing the solution (e.g., P. 7,

  1st Par. – Rich Internet Applications (RIAs) provide this Web

  application solution. Macromedia® defines RIAs as combining the best

  user interface functionality of <u>desktop software applications</u> with the

  broad reach and low-cost deployment of Web applications and the best

  of interactive, multimedia communication. Specifically, the best of <u>the</u>

  <u>desktop</u> includes providing <u>an interactive user interface for validation</u>

  <u>and formation</u>, fast interface response times with no page refresh,

  common user interface behaviors such as drag-and-drop and <u>ability to</u>

  <u>work online and offline</u>; P. 16, 4th Par., Lines 7-10 – XML houses the

  bulk of the product information, which is all now managed in a content

  management system allowing *FootJoy*® to more easily update the

  product content or change <u>the formulas and criteria weights</u> used in the

recommendations; P. 23, 3rd Par. – As part of the effort, they worked

with the product group <u>to prototype a visual rule construction tool</u> that

would allow a line of business manager <u>to create rules</u> himself without

the need to go to the IT department); and

- a fourth tool for generating code offline, said code forming an initial and

   operational version of the business application to be supplied as a

   normalized input to a regular desktop development system (e.g., P. 7,

   1st Par. – Rich Internet Applications (RIAs) provide this Web

   application solution. Macromedia® defines RIAs as combining the best

   user interface functionality of <u>desktop software applications</u> with the

   broad reach and low-cost deployment of Web applications and the best

   of interactive, multimedia communication. Specifically, the best of <u>the</u>

   <u>desktop</u> includes providing <u>an interactive user interface for validation</u>

   <u>and formation</u>, fast interface response times with no page refresh,

   common user interface behaviors such as drag-and-drop and <u>ability to</u>

   <u>work online and offline</u>); and

- a web server connectable to the communication network, the web

   server providing the factory building files and controlling the software

   factory displayed in the browser interface of the workstation (e.g., P. 8,

   1st Par. – An RIA provides a strong technical platform that <u>effectively</u>

   <u>restores the client's abilities</u> to be more like that of desktop software

   applications, or a traditional client in <u>a client/server system</u>; It fits into

   the traditional n-tier development process and integrates into legacy

environments to extend existing applications without the need to

rework then).

Duhl does not explicitly disclose a second tool for constructing the solution

using business models in relation with the solution parameters, the second tool

comprising components for designing basic characteristics of the solution and a

business domain model of the business application having a main entity and

related entities, the main entity establishing relationships with the related entities,

the main entity and the related entities having attributes and actions, the second

tool also comprising components for designing a menu of the business

application, specific functions of the business application, and functional

descriptions of the business application.

However, in an analogous art of *Attribute Dictionary in a Business Logic*

Services Environment, Bowman-Amuah discloses a second tool for constructing

the solution using business models in relation with the solution parameters (e.g.,

Col. 174; Lines 57-62), the second tool comprising components for designing

basic characteristics of the solution (e.g., Fig. 42, elements of "Other Patterns",

" Other Frameworks"; Fig. 50, element 5008) and a business domain model of

the business application having a main entity and related entities (e.g., Fig. 42,

element of Business Entity Component; Fig. 50, elements of "Workflow", "Class

Diagram"), the main entity establishing relationships with the related entities

(e.g., Fig. 104; Col. 232, Line 53 through Col. 233, Line 49), the main entity and

the related entities having attributes and actions (e.g., Col. 10, Line 56 through

Col. 11, Line 2), the second tool also comprising components for designing a

menu of the business application (e.g., Fig. 40, elements 3906, 4006, 3908),

specific functions of the business application (e.g., Fig. 45; Col. Lines 30-31, 58-

67), and functional descriptions of the business application (e.g., Fig. 49, element

of Detailed Design).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Bowman-Amuah into

the Duhl's system to further provide a second tool for constructing the solution

using business models in relation with the solution parameters, the second tool

comprising components for designing basic characteristics of the solution and a

business domain model of the business application having a main entity and

related entities, the main entity establishing relationships with the related entities,

the main entity and the related entities having attributes and actions, the second

tool also comprising components for designing a menu of the business

application, specific functions of the business application, and functional

descriptions of the business application in Duhl system.

The motivation is that it would further enhance the Duhl's system by taking,

advancing and/or incorporating Bowman-Amuah's system which offers significant

advantages for software patterns and more particularly to a facility for

encapsulating architectural mechanisms within business objects as once

suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21).

4.   **As to claim 2** (incorporating the rejection in claim 1) (Original), Duhl

discloses the distributed fabrication system wherein the first, the second, the third

and the fourth tools of the software factory use a business model to assist with

creation of the business application to isolate business application definitions

from implementation of the business application on any specific technology

platform (e.g., P. 26, 5th Par., 1st through 3rd bullets – Allow developers to write

applications using familiar development models to utilize and extend their current

skills without requiring them to adopt entirely new or different skills; Use standard

and standards-based technologies; Use industry specific programming models

and patterns; P. 29, Figure 4 – Macromedia® Flex Presentation Tier – XML

declarative language for application definitions, J2EE® and .NET®).

5.   **As to claim 3** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the first tool further comprises importing means for

importing a business object and data model (e.g., Col. 115, Lines 27-32; Col.

183, Lines 9-15) for constructing the solution and to design the basic

characteristics of the solution, the application business domain model specific

functions (e.g., Col. 13, Lines 30-38; Col. 140, Lines 56-65), and the application

functional descriptions (e.g., Col. 174, Lines 57-62).

6.   **As to claim 4** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the code forming the business application comprises an

applicative framework supplying a generic dynamically adaptable N-Tier client-

server-object-oriented applicative infrastructure (e.g., Col. 32, Lines 45-47; Col.

10, Lines 45-55) constructed on top of a third party software system

infrastructure (e.g., Col. 37, Lines 39-42) to support the business application

(e.g., Col. 19, Lines 34-37), the third party software system infrastructure being

complemented by database management system components (e.g., Col. 51,

Lines 52-55; Col. 52, Lines 17-35).

7.   **As to claim 5** (incorporating the rejection in claim 4) (Original), Duhl

discloses the distributed fabrication system wherein the applicative framework

comprises generic adaptable software structures for the creation of the business

application on any specific technology platform using a web server, a business

server and a database server on which the business application is fabricated,

developed, tested and deployed, the applicative framework also comprising:

- user services for managing a business application user interface, relying

  on a XInternet one web page application pattern (e.g., P. 26, 5th Par., 1st

  through 3rd bullets – Allow developers to write applications using familiar

  development models to utilize and extend their current skills without

  requiring them to adopt entirely new or different skills; Use standard and

  standards-based technologies; Use industry specific programming models

  and patterns), on a workstation having a browser interface to access the

  business application from the web server on which business application

  web services are deployed (e.g., Figure 2 – Rich Internet Application

  Spectrum; P. 10, 1st Par. – Figure 2 shows the spectrum of potential uses

for Rich Internet Applications. It is broad, ranging from externally facing

interactive sites, to customer and partner facing applications, to internal

enterprise and departmental applications), the business application user

interface being a dynamic web page avoiding web page transitions for

user experience (e.g., P. 1, 2nd Par. – Macromedia® has developed

<u>technology and tools</u> that enable new kinds of engaging, <u>highly interactive</u>,

applications and <u>user experiences</u>; P. 3, 5th Par. – But a new approach is

needed to represent these more complex processes, one which <u>reduces</u>

<u>the number of steps or page-flips</u> (avoiding web page transitions) and

enables a higher degree of interactivity within the <u>user interface</u>), the user

services comprising one web page application components library (e.g.,

Figure 4 – Macromedia® Flex Presentation Tier – element of '<u>*Flex* Class</u>

<u>Library</u>'; P. 29, 2nd Par., Lines 10-13 – *Flex* comes with <u>a class library</u>

consisting of components such as <u>containers</u>, controls, etc, and

managers, which are services that <u>are commonly used and simplify the</u>

<u>creation of rich applications</u>) for displaying the business application user

interface on the browser interface and for communicating between the

business application user interface displayed in the browser interface

(e.g., P. 3, 5th Par. – But a new approach is needed to represent these

more complex processes, one which <u>reduces the number of steps or</u>

<u>page-flips </u>and enables a higher degree of interactivity within the <u>user</u>

<u>interface</u>. In many cases, <u>a highly interactive single screen interface</u> can

represent these complex, multi-step or non-linear workflows directly and

intuitively) and the business application web services deployed on the web

server (e.g., P. 9, 3rd bullet – Provide an engaging, highly interactive

presentation layer to underlying <u>Web Services</u>; P. 21, 3rd Par. – RIAs are

applicable within an enterprise for providing an integrated single screen

view into legacy systems, business data visualization, e-learning and

information portals, or in serving as a presentation layer to <u>Web Services-</u>

<u>based applications</u>), the one web page application components library

providing bi-directional communications between the workstation and the

web server (e.g., P. 5, 1st Par. – What's needed is the ability to have <u>highly</u>

<u>interactive</u> and <u>locally intelligent client-side applications</u> that can respond

to user input and change their state or interface without the need for a full-

page refresh or interruptive <u>communications with a server</u>);

Bowman-Amuah discloses the following:

 o business services for managing business application logic (e.g.,

   Fig. 12, elements of Business Logic, Directory Services) and

   communications between the business application web services

   (e.g., Col. 107, Lines 8-11), the applicative framework and the third

   party software system infrastructure (e.g., Col. 37, Lines 39-42), the

   business services being implemented on the business server (e.g.,

   Fig. 12, elements of Information, Database), the business services

   comprising generic adaptable components having interface

   application components (e.g., Fig. 40, element 4006), core

   application components (e.g., Col. 24, Lines 19-24), utility

application components (e.g., Col. 36, Lines 4-7; Col. 59, Lines 14-

16) and task application components (e.g., Fig. 12, element System

Services – Task); the generic components being used to insure

code reusability, adaptability, uniformity, isolation, stability,

robustness, scalability and performance (e.g., Col. 125, Lines 46-

52); and

o data services (e.g., Col. 88, Lines 46-57) for managing business

application data access logic (e.g., Col. 100, Lines 62-64); and

communications (Fig. 16, element Network Connections) between

the business services (Col. 126, Lines 60-65; Col. 199, Lines 10-

13) and the third party database management system components

(e.g., Col. 52, Lines 32-34) on the database server (e.g., Col. 34,

Lines 24-28) upon request of the business server (e.g., Col. 34,

Lines 24-28) on which the business services are implemented, the

data services comprising generic adaptable database access

components (e.g., Col. 51, Lines 55-64) having database scripts

(e.g., Col. 104, Lines 36-40) to automatically assist the creation of

application database tables (e.g., Col. 278, Lines 30-33; Fig. 126,

creates) and Stored procedures (e.g., Col. 278, Lines 50-54)

required to access and manage application data on the database

server.

8. **As to claim 6** (incorporating the rejection in claim 5) (Original), Duhl

discloses the distributed fabrication system wherein the code generated by the

fourth tool comprise an approved, operational and well-formed solution

comprising the applicative framework specified from business application

definitions to be supplied as a normalized input to a regular desktop development

system (e.g., P. 7, 1st Par. – Rich Internet Applications (RIAs) provide this Web

application solution. Macromedia® defines RIAs as combining the best user

interface functionality of <u>desktop software applications</u> with the broad reach and

low-cost deployment of Web applications and the best of interactive, multimedia

communication. Specifically, the best of <u>the desktop</u> includes providing <u>an</u>

<u>interactive user interface for validation and formation</u>, fast interface response

times with no page refresh, common user interface behaviors such as drag-and-

drop and <u>ability to work online and offline</u>).

9. **As to claim 7** (incorporating the rejection in claim 1) (Original), Duhl

discloses the distributed fabrication system wherein the first tool also comprises

security components to define security for business users and information

technology experts access rights and roles to the solution (e.g., Table 2 – Rich

Internet Application Development Profiles, 2nd Col., 3rd bullet – Security and

standards are critical).

10. **As to claim 8** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the second tool comprises web services (e.g., Col. 107,

Lines 8-11) to define and connect application domain entities (e.g., Col. 13, Lines

30-38; Col. 140, Lines 56-65) and the third tool comprises web services to

preview, test, validate and interact with application domain objects and object

links (e.g., Col. 159, Lines 32-42; Col. 171, Lines 24-28; Col. 188, Lines 47-50;

Col. 51, Line 65 through Col. 52, Line 3).

11.   **As to claim 9** (incorporating the rejection in claim 8) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the dynamic database simulation means (e.g., Col. 284,

Lines 7-10) for testing the working prototype of the business application (e.g.,

Fig. 2, elements 206, 208; Col. 17, Lines 46-48; Col. 143, Lines 63-64; Col. 166,

Lines 2-57) comprise an XML document (e.g., Col. 41, Lines 14-48) simulating

an application database, the XML document being used to add, delete and

modify the application domain objects (e.g., Col. 277, Lines 29-34) and object

links (e.g., Col. 159, Lines 32-42; Col. 171, Lines 24-28; Col. 188, Lines 47-50;

Col. 51, Line 65 through Col. 52, Line 3).

12.   **As to claim 10** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the database simulation means (e.g., Col. 284, Lines 7-10)

for testing the working prototype of the business application (e.g., Fig. 2,

elements 206, 208; Col. 17, Lines 46-48; Col. 143, Lines 63-64; Col. 166, Lines

2-57) comprise object operation means for adding objects in a simulated

database, modifying the objects in the simulated database, deleting the objects

from the simulated database and finding, adding, modifying and deleting links

between the objects, the object operation means being used for testing the main

entity objects of the application (e.g., Col. 277, Lines 29-34; Col. 51, Lines 52-55;

Col. 271, Lines 28-31), the related-entities objects of the application (e.g., Fig.

42, element of Business Entity Component; Fig. 50, elements of "Workflow",

"Class Diagram"), the menu of the application (e.g., Fig. 40, elements 3906,

4006, 3908), the specific functions of the application and the functional

descriptions of the application (e.g., Fig. 49, element of Detailed Design).

13.   **As to claim 11** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) further comprising a database server (e.g., Col. 34, Lines 24-28)

connectable to the communication network (e.g., Fig. 16, element Network

Connections), wherein the communication components for feedback messages

(e.g., Col. 171, 24-28) between the users testing the working prototype of the

business application (e.g., Col. 14, Lines 15-25) and the user constructing the

solution comprise collaborative functions means (e.g., Col. 119, Lines 24-27; Col.

157, Lines 65-67; Col. 69, Lines 30-36) for providing a collaboration center with

the feedback messages centralized (e.g., Col. 30, Lines 41-46; Col. 49, Lines 33-

36) on the database server.

14.   **As to claim 12** (incorporating the rejection in claim 1) (Original), Duhl

discloses the distributed fabrication system wherein the factory building files are

selected from a group consisting of HTML files (e.g., P. 23, Sec. of Embedded

RIA Modules, 1st Par. – A RIA can also be used in a hybrid application consisting

a Macromedia® Flash module embedded into an existing HTML page of a site or

application), ASPx files (e.g., P. 29, 2nd Par. – Flex also provides a development

model that will be familiar to JSP, ASP, XSLT developers), DHTML components

files, programs files, assemblies files, components files, XML Documents files

and Web Services files accessed (e.g., P. 29, 2nd Par. – Using MXML – the

codename for a XML declarative programming language for creating and defining

rich user experiences that is currently being proposed as a new XML standard –

and *ActionScript*, a programming language for procedural programming, Flex

allows traditional developers to utilize their existing XML and scripting skills to

develop new rich Internet applications) from HTTP,S and SOAP protocols (e.g.,

P. 29, 1st Par. – The application uses SOAP for communications back to the

server).

15.   **As to claim 13** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the third tool further comprises components for

automatically generating a functional document of the solution (e.g., Fig. 14,

element 1416; Col. 53, Lines 21-27; Col. 53, Lines 46-50).

16.   **As to claim 14** (incorporating the rejection in claim 1) (Original), Duhl

discloses the distributed fabrication system wherein the solution comprises a

plurality of the business application (e.g., P. 9, Figure 2 – Rich Internet

Application Spectrum; P. 10, 1st Par. – Figure 2 shows the spectrum of potential

uses for Rich Internet Applications; It is broad, ranging from externally facing

interactive sites, to customer and partner facing applications, to internal

enterprise and departmental applications).

17.   **As to claim 15** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the testing of the working prototype of the business

application allows to determine a state of operability (e.g., Col. 23, Lines 1-4) and

profitability (e.g., Col. 25, Lines 15-19) of the solution by following a project go/no

go type workflow to reduce cost and time for project approval (e.g., Col. 116,

Lines 5-7, 14-17).

18.   **As to claim 16** (Currently Amended), Duhl discloses an applicative

framework system supplying a generic dynamically adaptable N-Tier client-server

object-oriented applicative infrastructure constructed on top of a third party

software system infrastructure to support a business application compatible with

XInternet technologies via a communication network (e.g., P. 8, 1st Par. – An RIA

provides a strong technical platform that <u>effectively restores the client's abilities</u>

to be more like that of desktop software applications, or a traditional client in <u>a</u>

client/server system; It fits into the traditional n-tier development process and

integrates into legacy environments to extend existing applications without the

need to rework then), the third party software system infrastructure being

complemented by database management system components, the applicative

framework system comprising:

- a client workstation connectable to the communication network, the

  workstation having a browser interface;

- a web server connectable to the communication network (e.g., P. 8, 1st

  Par. – An RIA provides a strong technical platform that effectively restores

  the client's abilities to be more like that of desktop software applications,

  or a traditional client in a client/server system; It fits into the traditional n-

  tier development process and integrates into legacy environments to

  extend existing applications without the need to rework then);

- an applicative framework comprising generic adaptable software

  structures for the creation of the online business application on any

  specific technology platform using the web server, the business server

  and the database server on which the business application is fabricated,

  developed, tested and deployed (e.g., P. 7, 1st Par. – Rich Internet

  Applications (RIAs) provide this Web application solution. Macromedia®

  defines RIAs as combining the best user interface functionality of desktop

  software applications with the broad reach and low-cost deployment of

  Web applications and the best of interactive, multimedia communication.

  Specifically, the best of the desktop includes providing an interactive user

interface for validation and formation, fast interface response times with no

page refresh, common user interface behaviors such as drag-and-drop

and ability to work online and offline), the applicative framework also

comprising:

- o user services for managing a business application user interface,

   relying on a XInternet one web page application pattern (e.g., P. 26,

   5th Par., 1st through 3rd bullets – Allow developers to write

   applications using familiar development models to utilize and

   extend their current skills without requiring them to adopt entirely

   new or different skills; Use standard and standards-based

   technologies; Use industry specific programming models and

   patterns), on a workstation having a browser interface to access the

   business application online from the web server on which business

   application web services are deployed (e.g., Figure 2 – Rich

   Internet Application Spectrum; P. 10, 1st Par. – Figure 2 shows the

   spectrum of potential uses for Rich Internet Applications. It is broad,

   ranging from externally facing interactive sites, to customer and

   partner facing applications, to internal enterprise and departmental

   applications), the business application user interface being a

   dynamic web page avoiding web page transitions for user

   experience (e.g., P. 1, 2nd Par. – Macromedia® has developed

   technology and tools that enable new kinds of engaging, highly

   interactive, applications and user experiences; P. 3, 5th Par. – But a

new approach is needed to represent these more complex

processes, one which <u>reduces the number of steps or page-flips</u>

(avoiding web page transitions) and enables a higher degree of

interactivity within the <u>user interface</u>), the user services comprising

one web page application components library (e.g., Figure 4 –

Macromedia® Flex Presentation Tier – element of '<u>*Flex* Class</u>

<u>Library</u>'; P. 29, 2nd Par., Lines 10-13 – *Flex* comes with <u>a class</u>

<u>library</u> consisting of components·such as <u>containers</u>, controls, etc,

and managers, which are services that <u>are commonly used and</u>

<u>simplify the creation of rich applications</u>) for displaying the business

application user interface on the browser interface (e.g., P. 3, 5th

Par. – But a new approach is needed to represent these more

complex processes, one which <u>reduces the number of steps or</u>

<u>page-flips</u> and enables a higher degree of interactivity within the

<u>user interface</u>. In many cases, <u>a highly interactive single screen</u>

<u>interface</u> can represent these complex, multi-step or non-linear

workflows directly and intuitively) and for communicating between

the business application user interface displayed in the browser

interface and the business application web services deployed on

the web server (e.g., P. 9, 3rd bullet – Provide an engaging, highly

interactive presentation layer to underlying <u>Web Services</u>; P. 21, 3rd

Par. – RIAs are applicable within an enterprise for providing an

integrated single screen view into legacy systems, business data

visualization, e-learning and information portals, or in serving as a

presentation layer to <u>Web Services-based applications</u>), the one

web page application components library providing bi-directional

communications between the workstation and the web server (e.g.,

P. 5, 1st Par. – What's needed is the ability to have <u>highly</u>

<u>interactive</u> and <u>locally intelligent client-side applications</u> that can

respond to user input and change their state or interface without the

need for a full-page refresh or interruptive <u>communications with a</u>

<u>server</u>).

Duhl does not explicitly disclose the followings:

- o a business server connectable to the communication network;

- o a database server connectable to the communication network; and

- o business services for managing business application logic and

    communications between the business application online web

    services, the business services being implemented on the business

    server, the applicative framework and system components of the

    third party software system infrastructure, the business services

    comprising generic adaptable components having interface

    application components, core application components, utility

    application components and task application components being

    used to insure code reusability, adaptability, uniformity, isolation,

    stability, robustness, scalability and performance; and

     o   data services for managing online business application data access

logic and communications between the business services and the

third party database management system components on the

database server upon request of the business server on which the

business services are implemented, the data services comprising

generic adaptable database access components having database

scripts to automatically assist the creation of application database

tables and stored procedures required to access and manage

application data on the database server.

However, in an analogous art of *Attribute Dictionary in a Business Logic

Services Environment*, Bowman-Amuah discloses the followings:

- a business server (e.g., Col. 34, Lines 24-28) connectable to the

  communication network (e.g., Fig. 16, element Network Connections);

- a database server (e.g., Col. 34, Lines 24-28) connectable to the

  communication network (e.g., Fig. 16, element Network Connections); and

- business services for managing business application logic (e.g., Fig. 12,

  elements of Business Logic, Directory Services) and communications

  between the business application online web services (e.g., Col. 107,

  Lines 8-11), the business services being implemented on the business

  server (e.g., Fig. 12, elements of Information, Database), the applicative

  framework and system components of the third party software system

  infrastructure (e.g., Col. 37, Lines 39-42), the business services

  comprising generic adaptable components having interface application

components (e.g., Fig. 40, element 4006), core application components

(e.g., Col. 24, Lines 19-24), utility application components (e.g., Col. 36,

Lines 4-7; Col. 59, Lines 14-16) and task application components (e.g.,

Fig. 12, element System Services – Task) being used to insure code

reusability, adaptability, uniformity, isolation, stability, robustness,

scalability and performance (e.g., Col. 125, Lines 46-52); and

- data services (e.g., Col. 88, Lines 46-57) for managing business

  application data access logic (e.g., Col. 100, Lines 62-64) and

  communications (e.g., Fig. 16, element Network Connections) between

  the business services (e.g., Col. 126, Lines 60-65; Col. 199, Lines 10-13)

  and the third party database management system components (e.g., Col.

  52, Lines 32-34) on the database server (e.g., Col. 34, Lines 24-28) upon

  request of the business server (e.g., Col. 34, Lines 24-28) on which the

  business services are implemented, the data services comprising generic

  adaptable database access components (e.g., Col. 51, Lines 55-64)

  having database scripts (e.g., Col. 104, Lines 36-40) to automatically

  assist the creation of application database tables (e.g., Col. 278, Lines 30-

  33; Fig. 126, creates) and stored procedures (e.g., Col. 278, Lines 50-54)

  required to access and manage application data on the database server.

Therefore, it would have been obvious to one of ordinary skill in the art, at

the time the invention was made to combine the teachings of Bowman-Amuah

into the Duhl's system to further provide the followings:

- a business server connectable to the communication network;

- a database server connectable to the communication network; and

- business services for managing business application logic and

  communications between the business application online web services,

  the business services being implemented on the business server, the

  applicative framework and system components of the third party software

  system infrastructure, the business services comprising generic adaptable

  components having interface application components, core application

  components, utility application components and task application

  components being used to insure code reusability, adaptability, uniformity,

  isolation, stability, robustness, scalability and performance; and

- data services for managing online business application data access logic

  and communications between the business services and the third party

  database management system components on the database server upon

  request of the business server on which the business services are

  implemented, the data services comprising generic adaptable database

  access components having database scripts to automatically assist the

  creation of application database tables and stored procedures required to

  access and manage application data on the database server in Duhl

  system.

The motivation is that it would further enhance the Duhl's system by taking,

advancing and/or incorporating Bowman-Amuah's system which offers significant

advantages for software patterns and more particularly to a facility for

encapsulating architectural mechanisms within business objects as once

suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21).

19.   **As to claim 17** (incorporating the rejection in claim 16) (Original), Duhl

discloses the applicative framework system wherein the third party software

system infrastructure comprises a MICROSOFT .NET framework (e.g., P. 6, 3rd

Par., 10th bullet – Access multiple middle tier services (both .NET® or Java®)

and backend data stores; P. 17, 4th Par., Lines 1-2 – The site is built as a full

Macromedia Flash MX application connected via Flash Remoting and .Net

services to a full content management system) and Bowman-Amuah discloses

COM+ service components (e.g., Col. 104, Lines 13-14, 17-21).

20.   **As to claim 18** (incorporating the rejection in claim 16) (Original),

Bowman-Amuah discloses the applicative framework system wherein the

interface application components comprise function means for performing the

following operations to help create a normalized data model (e.g., Col. 276, Lines

50-54):

- o creating, inserting, updating and deleting main objects (e.g., Col. 177,

  Lines 24-27; Col. 277, Lines 29-34); creating, inserting, updating and

  deleting main object related objects (e.g., Col. 177, Lines 24-27; Col. 277,

  Lines 29-34);

- o creating, inserting, updating and deleting main object links to the related

  objects (e.g., Fig. 42, element of Business Entity Component; Fig. 50,

elements of "Workflow", "Class Diagram"); finding a list of the main objects

(Fig. 159, element 15900; Col. 277, Lines 29-34, 35-37; Col. 177, Lines

56-58; Col. 259, Lines 15-21);

o selecting in the list one of the main objects (e.g., Col. 177, Lines 56-58;

Col. 259, Lines 15-21); creating, inserting, updating and deleting main

object operations (e.g., Col. 177, Lines 56-58; Col. 259, Lines 15-21; Col.

277, Lines 29-34, 35-37); creating, inserting, updating and deleting main

object related object operations (e.g., Col. 10, Line 56 through Col. 11,

Line 2; Col. 277, Lines 29-34);

o creating, inserting, updating and deleting object de-normalized views (e.g.,

Col. 276, Lines 55-59); and

o creating, inserting, updating and deleting application menus (Fig. 40,

elements 3906, 4006, 3908; Col. 130, Lines 21-24).

21.   **As to claim 19** (incorporating the rejection in claim 16) (Original),

Bowman-Amuah discloses the applicative framework system wherein the core

application components comprise function means for performing the following

operations:

o managing business application workflow (e.g., Fig. 12, element of

Workflow; Fig. 39, element 3902; Col. 116, Lines 5-7, 14-17) and handling

business application architectural aspects (e.g., Fig. 36, element 3604;

Col. 127, Lines 48-53), the architectural aspects transaction management

(Col. 199, Lines 25-29), error management (e.g., Col. 101, Lines 61-64;

Fig. 174, element 17408; Col. 291, Lines 37-39) and diagnostic

management (e.g., Col. 265, Line 41);

o   implementing business application tasks and rules (e.g., Fig. 12, elements

of System Services – Task, Business Logic; Col. 199, Lines 1-6);

o   managing data services workflow transactions (e.g., Fig. 26, elements

2606, 2608; Fig. 179; Fig. 182; Fig. 185; Fig. 188); and

o   implementing database connections (e.g., Fig. 24, element 2402; Col. 84,

Lines 11-25).

22.   **As to claim 20** (incorporating the rejection in claim 16) (Original),

Bowman-Amuah discloses the applicative framework system wherein the utility

application components (e.g., Col. 36, Lines 4-7; Col. 59, Lines 14-16) comprise

an exception manager to manage warnings and errors (e.g., Col. 101, Lines 61-

64; Fig. 174, element 17408; Col. 291, Lines 37-39), a diagnostic·manager to

diagnose the business application (e.g., Col. 265, Line 41) and to recover from

errors (Fig. 30, element 3000 – Database Recovery; e.g., Col. 54, Lines 1-6), an

email manager to handle electronic communications (e.g., Col. 73, Lines 1-33), a

report manager to produce reports (e.g., Fig. 13, element 1316; Fig. 28, element

2880; Fig. 29; Fig. 31, element 3102), configuration files to replace old registry

settings (e.g., Col. 26, Lines 64-65; Col. 27, Lines 48-59; Col. 259, Lines 15-21),

and common functions means to provide basic reusable functions (e.g., Col. 11,

Lines 3-6).

23.   **As to claim 21** (incorporating the rejection in claim 16) (Original),

Bowman-Amuah discloses the applicative framework system (e.g., Figs. 10-12;

Col. 31, Lines 52-67) wherein the task application components comprise a

security manager to manage access rights validations (e.g., Col. 61, Lines 20-25;

Col. 63, Lines 1-2) to the business application (e.g., Col. 52, Line 52 through Col.

53, Lines 6) and a reference data manager supporting generic or specific

reference table data models (e.g., Fig. 14, element 1410; Col. 52, Lines 30-34).

24.   **As to claim 22** (Currently Amended), Duhl discloses a distributed

software fabrication process for creating, while promoting strategic alignment

between information technologies departments and business units objectives

(e.g., P. 23, 3rd Par. – The challenge was to create a prototype platform in two

months that would allow a business manager to quickly develop and change, and

centrally deploy new financial products, promotions and conditions ..... As part of

the effort, they worked with the product group to prototype a visual rule

construction tool that would allow a line of business manager to create rules

himself without the need to go to the IT department), a business application

compatible with XInternet technologies via a communication network system

(e.g., P. 1, 2nd Par. – Macromedia has developed technology and tools that

enable new kinds of engaging, highly interactive, applications and user

experience. Using a series of case studies, this White Paper examines Rich

Internet Applications (Xinternet technologies) – what they are, why they're

needed, who can use them and the business benefits available to companies

that employ them; P. 26, 4th Par. – To meet the needs of IT organizations these

tools will have to allow them to continue to work they way that they already do

and not force them to rip out and replace legacy technology. These new RIA

tools will need to provide the features that enhance IT developer's abilities to be

more creative and to accomplish RIA development with same or less effort than

the tools they use to create other types of applications; What is required are the

tools that can help developers in Global 2000 companies achieve these

objectives without encountering the difficulties or trying to write RIAs using just

3GL code, ….; P. 27, 2nd Par., Lines 7-10 – Macromedia® is delivering

technology for rich Internet applications now and in the first half of 2004 that

leverages the ubiquity and cross platform and device support of the Flash player,

and works with the hardware and infrastructure that already exists), the software

fabrication process comprising the steps of:

- displaying a software factory (e.g., P.28, Table 2 – Rich Internet

  Application Development Profiles; P. 29, Figure 4 – Macromedia® Flex

  Presentation Tier) through a browser interface of a client workstation

  connectable to the communication network (e.g., P. 8, 3rd Par. – Because

  of their architecture and capabilities, RIAs have the potential to

  fundamentally change the way companies engage and interact with their

  Web users, leading to more effective user experiences with top- and

  bottom-line results), the software factory allowing a user to fabricate the

  business application in response to business need specifications, the

  software factory being displayed in the browser interface from factory

building files (e.g., Figure 4 – Macromedia® Flex Presentation Tier –

element of '*Flex* Class Library'; P. 29, 2nd Par., Lines 10-13 – *Flex* comes

with a class library consisting of components such as containers, controls,

etc, and managers, which are services that are commonly used and

simplify the creation of rich applications);

- providing the factory building files from a web server to the client

  workstation and controlling the software factory displayed in the browser

  interface of the client workstation (e.g., P. 29, Figure 4 – Macromedia®

  Flex Presentation Tier – J2EE® and .NET®);

- defining a solution containing the business application via the software

  factory, the software factory comprising a first tool having components for

  entering solution parameters (e.g., P. 16, 4th Par., Lines 7-10 – XML

  houses the bulk of the product information, which is all now managed in a

  content management system allowing *FootJoy®* to more easily update the

  product content or change the formulas and criteria weights used in the

  recommendations);

- validating the solution via the software factory, the software factory

  comprising a third tool having components for previewing the solution

  online by automatically generating a working prototype of the business

  application using dynamic database simulation means for testing the

  working prototype of the business application online and communication

  components for feedback messages between users testing the online

  working prototype of the business application and users constructing the

solution (e.g., P. 7, 1st Par. – Rich Internet Applications (RIAs) provide this

Web application solution. Macromedia® defines RIAs as combining the

best user interface functionality of <u>desktop software applications</u> with the

broad reach and low-cost deployment of Web applications and the best of

interactive, multimedia communication. Specifically, the best of <u>the</u>

<u>desktop</u> includes providing <u>an interactive user interface for validation and</u>

<u>formation</u>, fast interface response times with no page refresh, common

user interface behaviors such as drag-and-drop and <u>ability to work online</u>

<u>and offline</u>);

- generating code offline via the software factory to form an initial and

operational version of the business application to be supplied as a

normalized input to a regular desktop development system (e.g., P. 7, 1st

Par. – Rich Internet Applications (RIAs) provide this Web application

solution. Macromedia® defines RIAs as combining the best user interface

functionality of <u>desktop software applications</u> with the broad reach and

low-cost deployment of Web applications and the best of interactive,

multimedia communication), the code forming the business application

comprising an applicative framework supplying a generic dynamically

adaptable N-Tier client-server object-oriented applicative infrastructure

constructed on top of a third party software system infrastructure (e.g., P.

8, 1st Par. – An RIA provides a strong technical platform that <u>effectively</u>

<u>restores the client's abilities</u> to be more like that of desktop software

applications, or a traditional client in <u>a client/server system</u>; It fits into <u>the</u>

traditional n-tier development process and integrates into legacy

environments to extend existing applications without the need to rework

then; Figure 4 – Macromedia® Flex Presentation Tier – element of '_Flex

Class Library_'; P. 29, 2nd Par., Lines 10-13 – _Flex_ comes with a class

library consisting of components such as containers, controls, etc, and

managers, which are services that are commonly used and simplify the

creation of rich applications) to support the business application on any

specific technology platform.

Duhl does not explicitly disclose the followings:

o constructing the solution using business models in relation with the

   solution parameters via the software factory, the software factory

   comprising a second tool having components for designing basic

   characteristics of the solution and a business domain model of the

   business application having a main entity and related entities, the main

   entity establishing relationships with the related entities, the main entity

   and the related entities having attributes and actions, the second tool also

   comprising components for designing a menu Of the business application,

   specific functions of the business application, and functional descriptions

   of the business application; and

o determining a state of operability and profitability of the solution by following a

   project go/no go type workflow to reduce cost and time for project definition

   and approval and to improve strategic alignment between information

   technologies and business units objectives.

However, in an analogous art of *Attribute Dictionary in a Business Logic Services Environment*, Bowman-Amuah discloses the followings:

o constructing the solution using business models in relation with the solution parameters via the software factory, the software factory comprising a second tool having components for designing basic characteristics of the solution (e.g., Fig. 42, elements of "Other Patterns", " Other Frameworks"; Fig. 50, element 5008) and a business domain model of the business application having a main entity and related entities (e.g., Fig. 42, element of Business Entity Component; Fig. 50, elements of "Workflow", "Class Diagram"), the main entity establishing relationships with the related entities (e.g., Fig. 104; Col. 232, Line 53 through Col. 233, Line 49), the main entity and the related entities having attributes and actions (e.g., Col. 10, Line 56 through Col. 11, Line 2), the second tool also comprising components for designing a menu Of the business application (e.g., Fig. 40, elements 3906, 4006, 3908), specific functions of the business application (e.g., Fig. 45; Col. Lines 30-31, 58-67), and functional descriptions of the business application (e.g., Fig. 49, element of Detailed Design); and

o determining a state of operability (e.g., Col. 23, Lines 1-4) and profitability of the solution (e.g., Col. 25, Lines 15-19) by following a project go/no go type workflow to reduce cost (e.g., Col. 116, Lines 5-7, 14-17) and time for project definition and approval (e.g., Col. 116, Lines 5-7, 14-17) and to improve strategic alignment between

information technologies and business units objectives (e.g., Fig. 48 –

Business Perspective vs. Systems and Technology Perspective; Col.

16, Line 66 through Col. 17, Line; 4; Fig. 48; Col. 162, Lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Bowman-Amuah into

the Duhl's system to further provide the followings:

- o constructing the solution using business models in relation with the

  solution parameters via the software factory, the software factory

  comprising a second tool having components for designing basic

  characteristics of the solution and a business domain model of the

  business application having a main entity and related entities, the main

  entity establishing relationships with the related entities, the main entity

  and the related entities having attributes and actions, the second tool also

  comprising components for designing a menu Of the business application,

  specific functions of the business application, and functional descriptions

  of the business application; and

- o determining a state of operability and profitability of the solution by

  following a project go/no go type workflow to reduce cost and time for

  project definition and approval and to improve strategic alignment between

  information technologies and business units objectives in Duhl system.

The motivation is that it would further enhance the Duhl's system by taking,

advancing and/or incorporating Bowman-Amuah's system which offers significant

advantages for software patterns and more particularly to a facility for

encapsulating architectural mechanisms within business objects as once

suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21).

25.   **As to claim 23** (incorporating the rejection in claim 1) (Original), Duhl

discloses the distributed fabrication system wherein the browser interface is a

container controller (e.g., P. 29, 2nd Par., Lines 10-13 – Flex comes with a class

library consisting of components such as containers, controls etc. and managers,

which are services that are commonly used and simplify the creation of rich

application).

26.   **As to claim 24** (incorporating the rejection in claim 16) (Original), Duhl

discloses the applicative framework system wherein the browser interface is a

container controller (e.g., P. 29, 2nd Par., Lines 10-13 – Flex comes with a class

library consisting of components such as containers, controls etc. and managers,

which are services that are commonly used and simplify the creation of rich

application).

27.   **As to claim 25** (incorporating the rejection in claim 22) (Original), Duhl

discloses a distributed software fabrication process wherein the browser interface

is a container controller (e.g., P. 29, 2nd Par., Lines 10-13 – Flex comes with a

class library consisting of components such as containers, controls etc. and

managers, which are services that are commonly used and simplify the creation

of rich application).

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kayam et al., System and Associated Methods for Software Assembly (Pub. No. US 2004/0268296 A1)

- Zondervan et al., *System, Method and Computer Program Product for Application Development Using a visual Paradigm to combine existing Data and Application* (Pub. No. US 2003/0115572 A1)

- M. R. Robinson, *Method and System for Creating Reusable Software Components through a Uniform Interface* (Pub. No. 2004/0205692 A1)

29.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben C. Wang whose telephone number is 571-270-1240. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TUAN DAM
SUPERVISORY PATENT EXAMINER

BCW

October 10, 2007